

Pressures on Freshwater Biodiversity in Ireland

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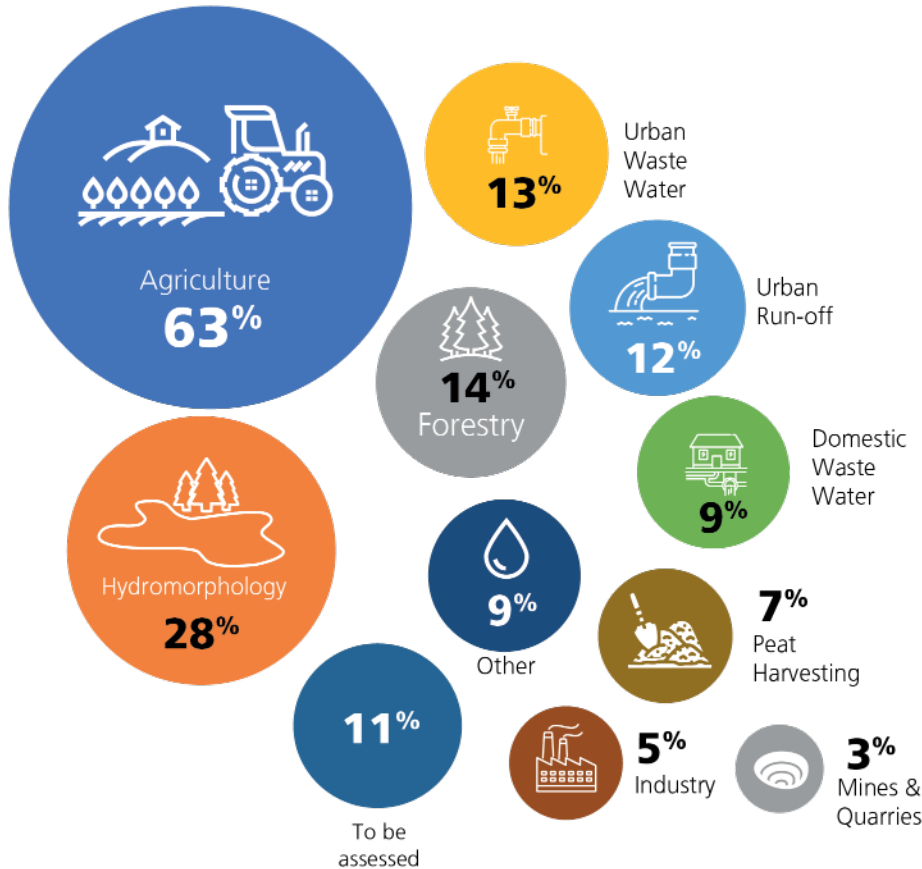
Regional Co-Ordinator
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Programme Manager

*Local Authority Waters Programme
(LAWPRO)*

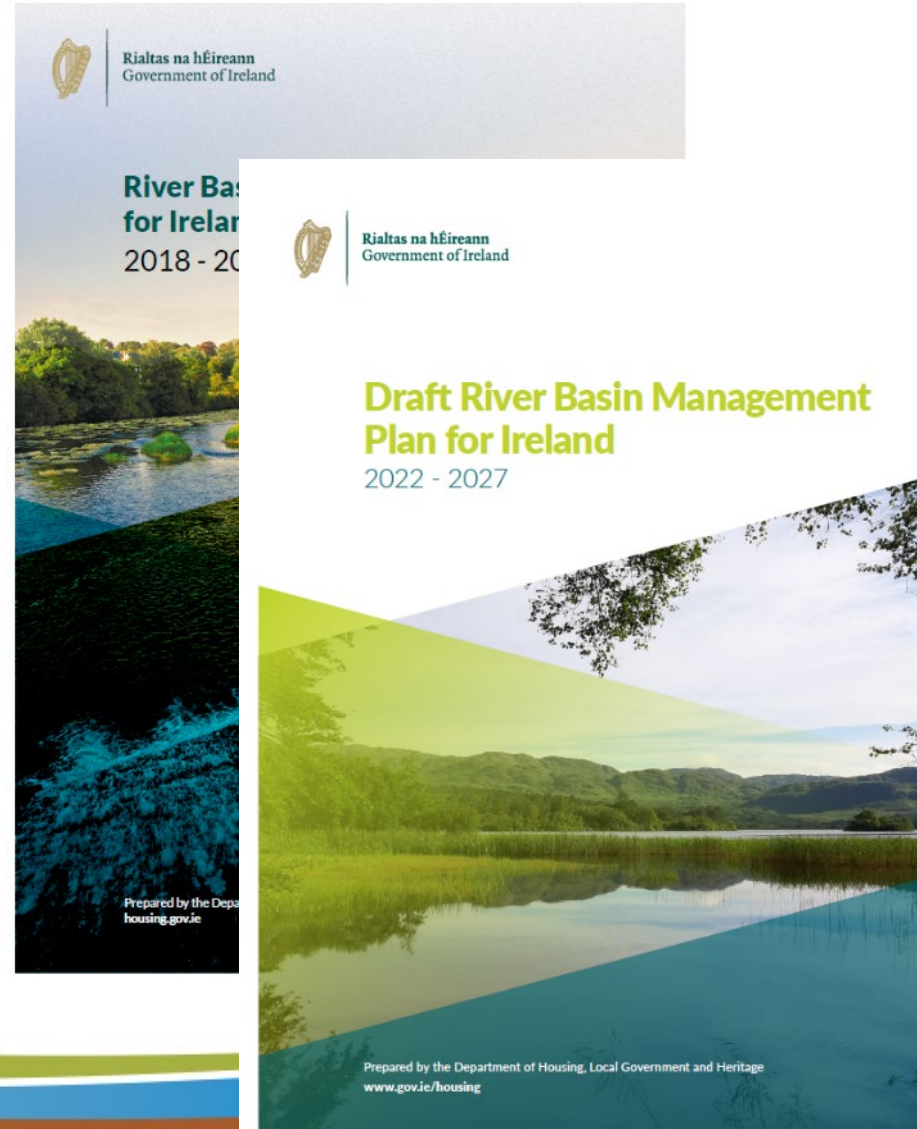


Outflow from Lough Adrehid into the Owenriff River
at the Quiet Man Bridge, Co Galway

Water Quality & the Water Framework Directive

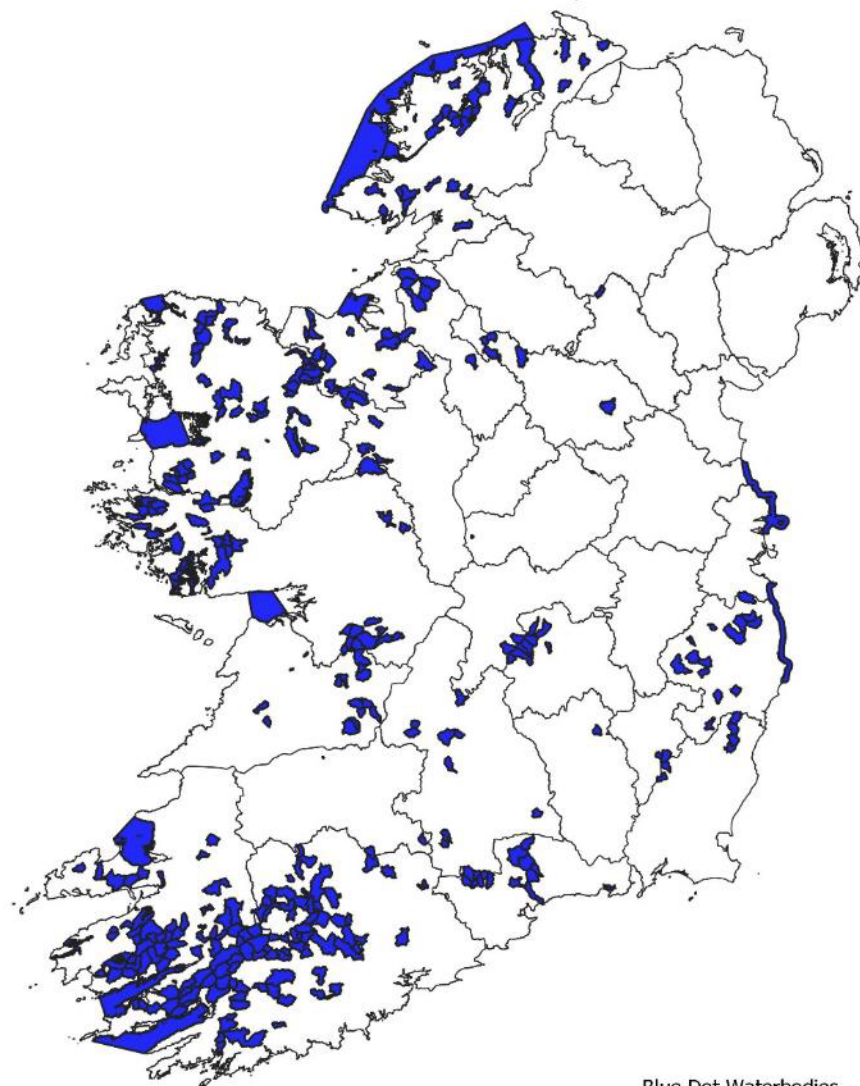


Source: EPA, 2022. Water Quality in Ireland 2016 – 2022 Summary Report



Special Mention to the Distribution of High Status Objective Waters or Blue Dots

- Present in most counties
- Majority along the Western seaboard, Wicklow and mountainous areas of the Midlands and South
- Importance of estuarine and coastal blue dots
- 166 out of 383 Blue Dot waters, or 43% only are achieving high status.



0 25 50 km

Blue Dot Waterbodies
■ Blue Dot Cycle 2
□ Counties

LAWPRO's Local Catchment Assessment Approach & Referrals



Referrals i.e. our evidence as passed to the body responsible for implementing actions to fix the pressures = 526 to date

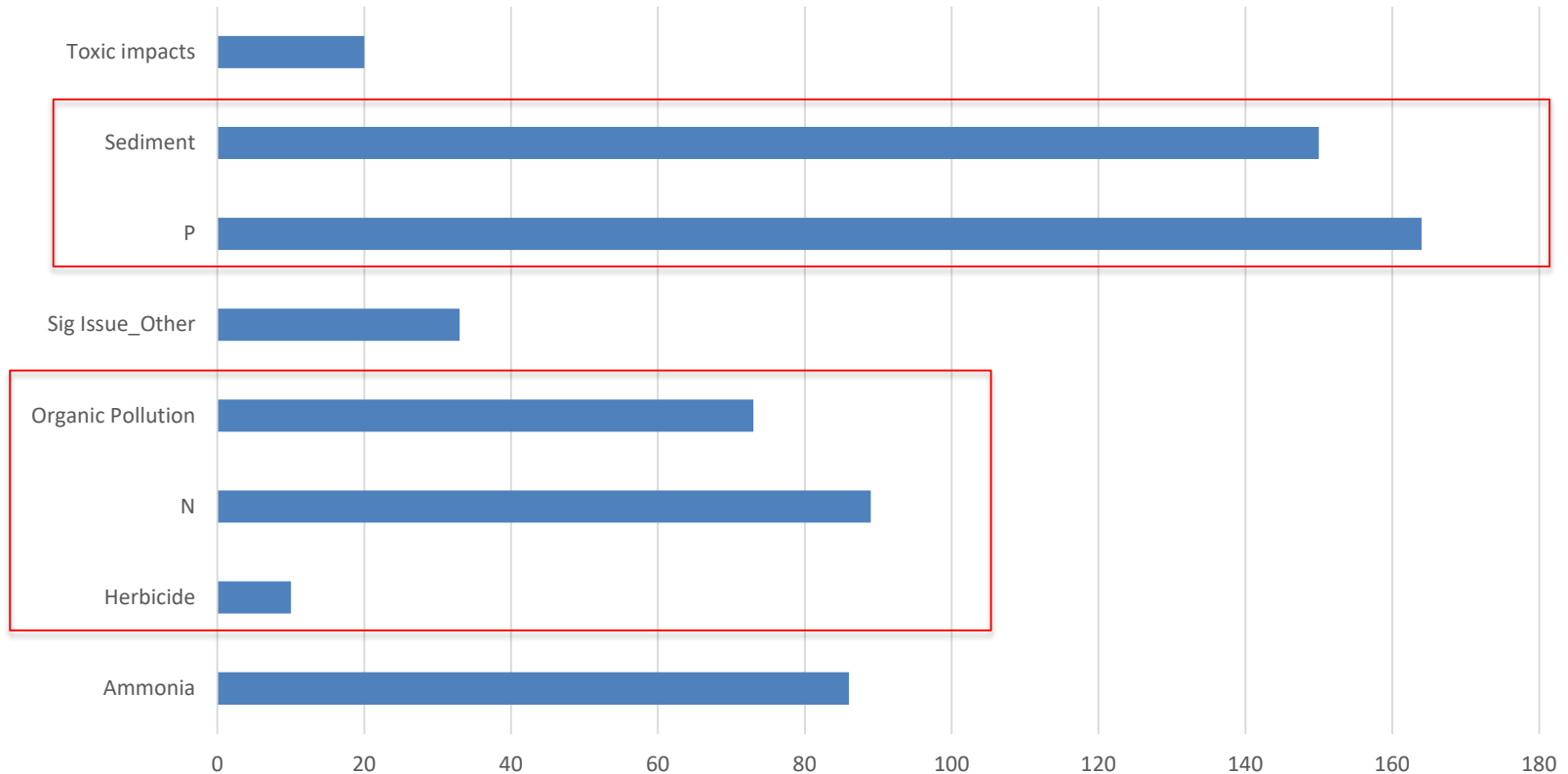
- 484 (92%) to the Agricultural Sustainability Support & Advisory Programme – phosphate, nitrate, sediment etc
- 19 Local authorities (discharges, domestic waste water)
- 14 EPA (Urban Waste Water & Water Treatment Plant discharges)
- 8 Forest Service (buffers, felling impacts, future risk because of unsuitable sites or legacy planting issues)
- 1 Other (windfarm)

Our evidence shows that agriculture is the overwhelming land use activity impacting on water bodies in catchments where water quality has declined.

Findings from LAWPRO Assessments

The 'Pollutants' - Agriculture

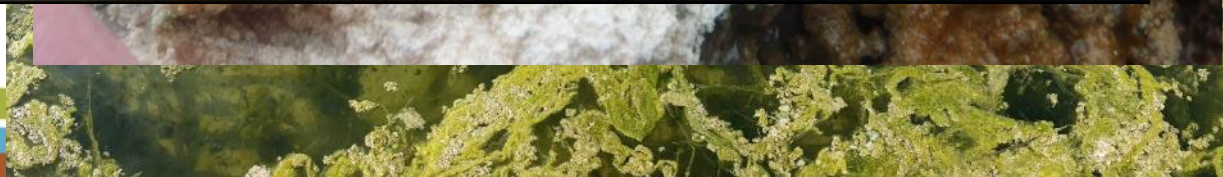
Referrals to the Agricultural Sustainability Support and Advisory Programme:
Significant (Agricultural) issues (n =404 waterbodies)



We need 'pollutant' driven solutions to resolve the impacts found in each water body.

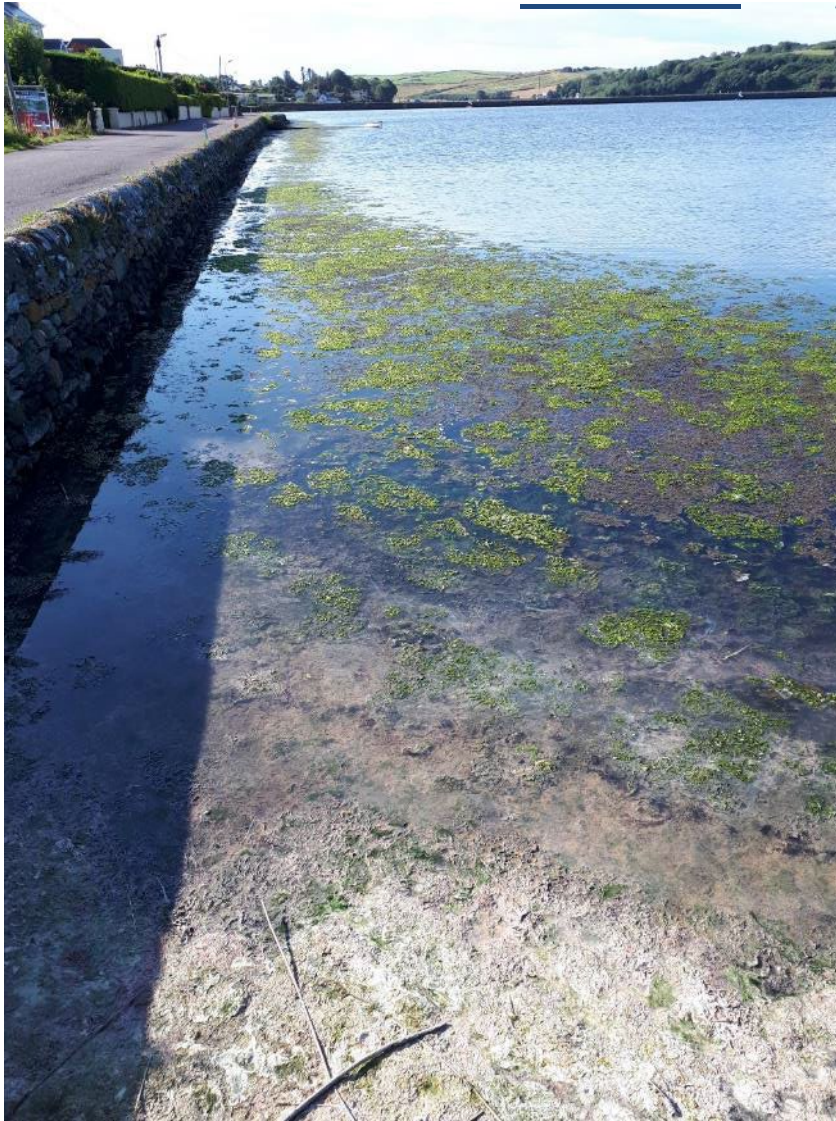
What does this look like in water bodies?

Phosphate impacts in Lough Carra, Co. Mayo



What does this look like in water bodies?

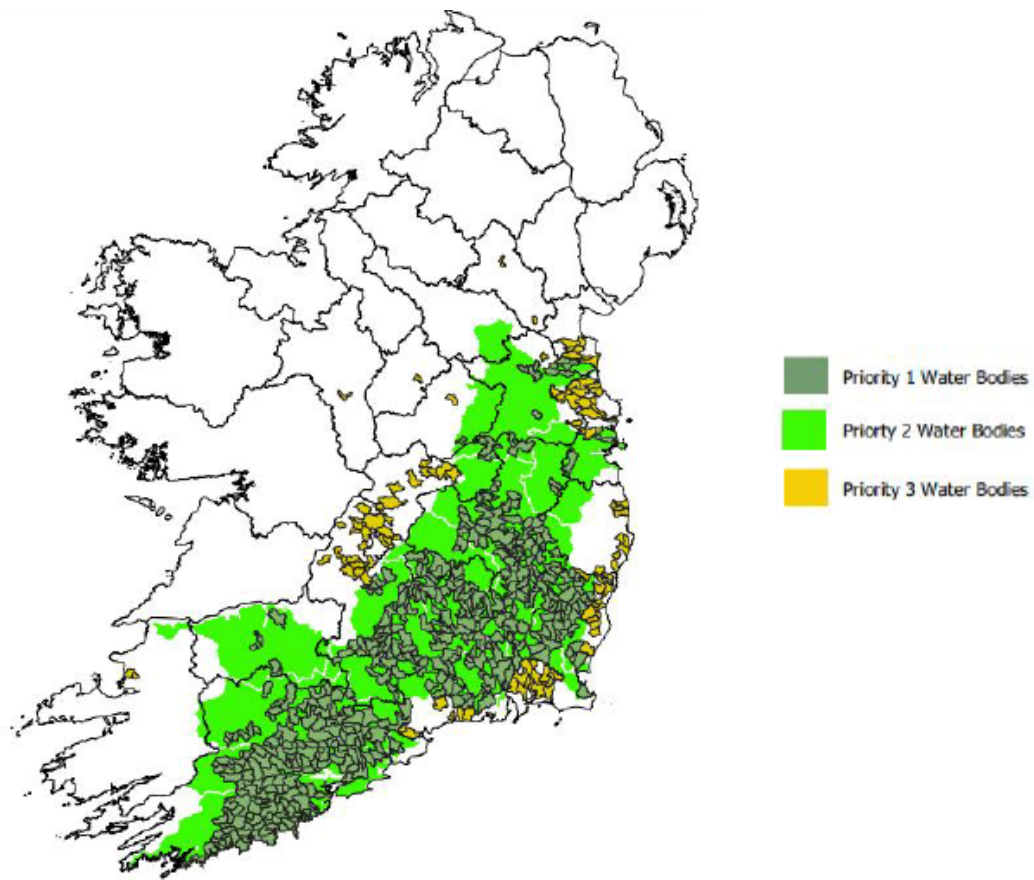
Nitrate impacts in our Coastal Areas



- Tourist town
- Bathing water – Activity centre
- Prolific algal growth – odour issue
- Briefly closed by HSE



Catchment Referrals for Nitrogen



- Catchment Referrals for Nitrogen are primarily driven by estuarine and coastal water quality and the need for improvements in the wider catchment area.
- Catchment Referrals for Nitrogen have been developed

Reduce the N loading from these catchments into the marine environment

Priority category description	No. of water bodies
1. Water bodies contributing high N within catchments of concern	404
2. High PIP N areas in catchments of concern (not included above)	733
3. Water bodies with elevated N (outside catchments of concern)	94
4. 20% reduction in use everywhere	All other water bodies

What does this look like in water bodies? *Sediment Impacts from Land Drainage,* *Drain Maintenance, Land Improvement*



- Better land drainage and land improvement guidance and advice for farmers.
- Better regulation and enforcement of land use change.
- Protect and encourage more riparian/bank side vegetation to enhance water quality, biodiversity, carbon sequestration, etc.

Agricultural Impacts contd. - Organic pollution

Silage effluent



Improved compliance with the Good Agricultural Practice Regulations, and more resources for enforcement. Recognition of environmental damage in the courts system.

Hydromorphology

– what is it and what are the solutions?

- Hydromorphology means the shape and flow of the waterbody.
- Changes to rivers and lakes such as Channelisation, Dams, weirs, culverts, and diversions can all impact negatively on the benefits that rivers and lakes provide.



What do Hydromorphology impacts look like on water bodies?



What do Hydromorphology impacts look like in water bodies?



Arterial Drainage Examples



Forestry - What do these impacts look like in water bodies?



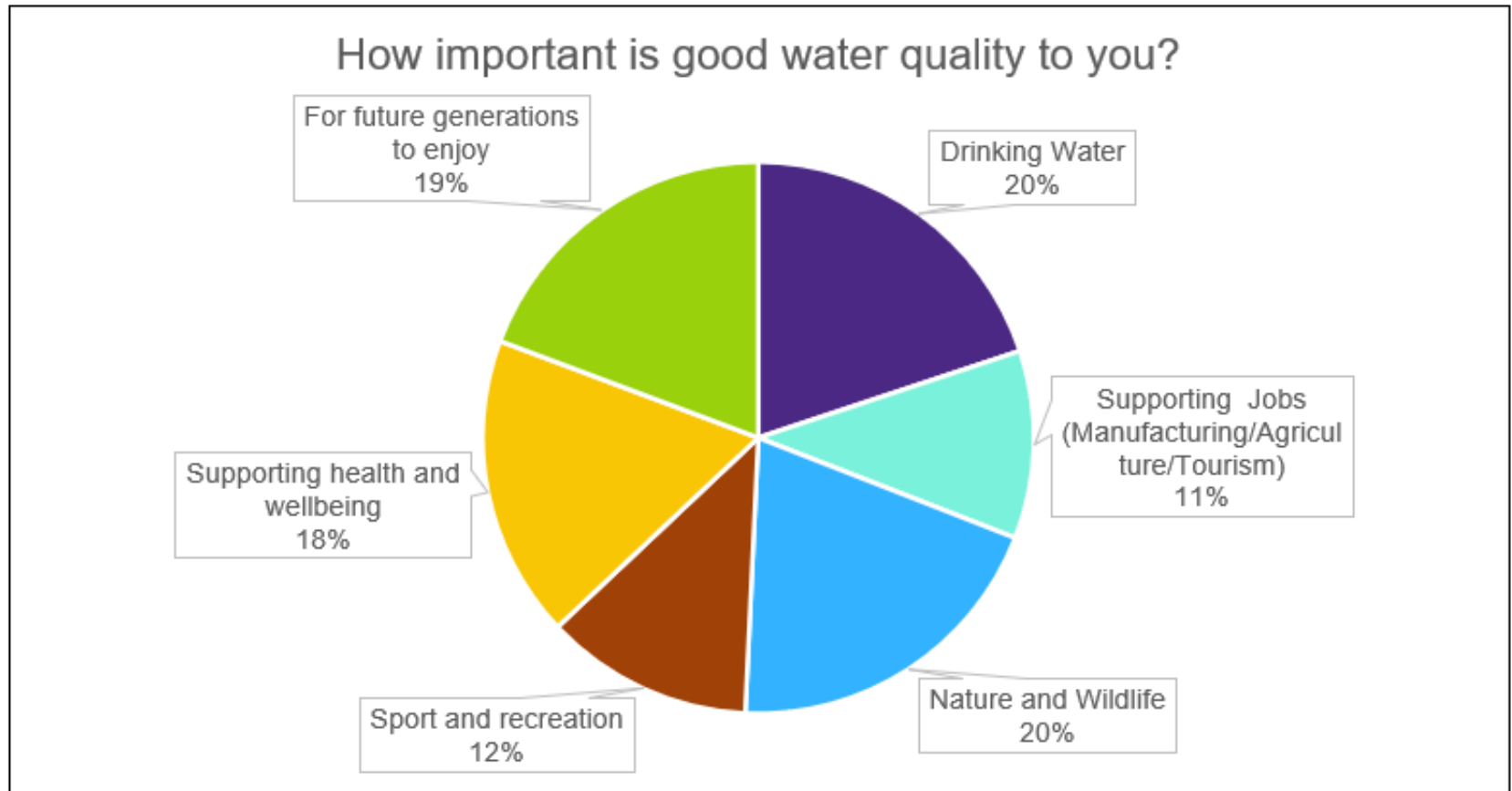
- Clear actions to address legacy forestry in unsuitable landscapes
- Improved environmental assessment of impacts
- Better enforcement of activities e.g. ecological supervision during felling, replanting, roading etc

Urban Waste Water impacts on water bodies



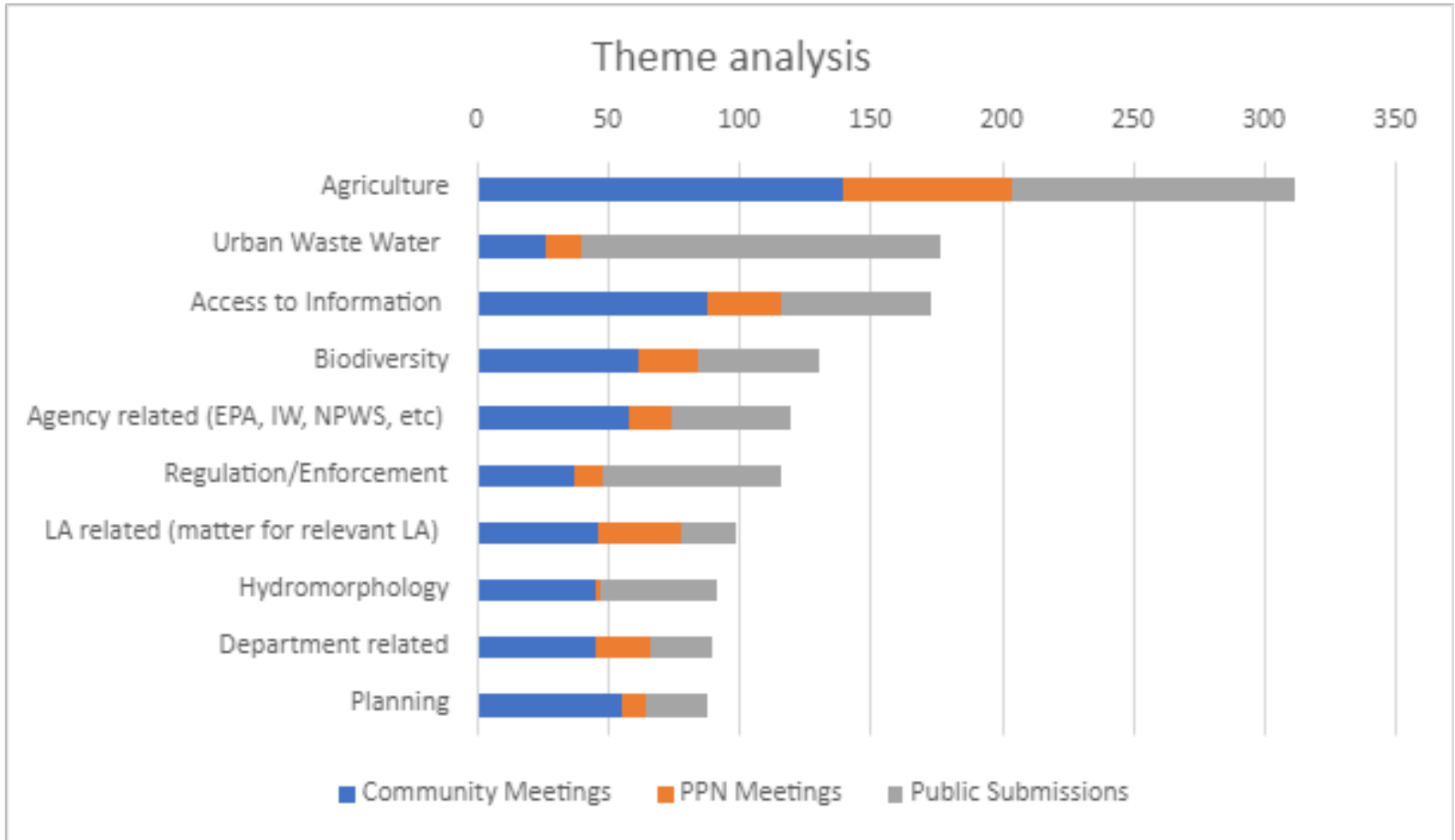
- Lack of investment in smaller plants in our towns and villages
- Untreated discharges.
- Length of time to rectify issues
- Focus on Urban Waste water Treatment Directive, over Water Framework Directive objectives.

What are Local Communities Saying? *Draft River Basin Management Plan Consultations Sept.2021 – March 2022*



Graph 1: The most important aspects of good water quality as ranked by respondents.

Top 10 themes raised



Nature-based Solutions

1. Looking to nature to inform solutions...
2. Working with nature at the core of solution delivery...
 - Water – integrated approach
 - Climate – resilience/cooling/adaptation & mitigation
 - Biodiversity – continuous (non-fragmented)
 - Health – water quality, cleaner air, combat heat island effect, (physical) mental health
 - Place making – aesthetics, soften urban landscapes, acoustics/clean air & temp.



[Publications - Local Authority Water Programme \(lawaters.ie\)](http://lawaters.ie)

Conclusions

- The catchment science evidence base is clear.
- Prioritisation on the biggest pressures is key.
- The solutions are known. We need to empower pressure stakeholders and communities to deliver.
- Better supports needed politically, legally, financially, etc.
- Improved Policy coherence, between Government Departments
 - particularly with Department of Agriculture
 - enforcement of Regulations, with faster response rates to pollution incidents etc
- Communities are on board – they have a strong voice; they want to be active and lead on local change – must be supported and fostered.
- The task is bigger than any one programme can deliver – we need more joined up thinking.
- Finally, the sense of urgency being voiced by the collective voices of Catchment Scientists, Community Water Officers, Catchment Groups working in this space and local communities we collaborate with, is not translating to adequate financial, legal, funding and other supports required.

Additional Slides for information for Assembly Members



Agricultural Impacts contd. - *Grassland herbicides impacts*



e.g. Impacts on drinking waters

Better and more regular advice to herbicide users and best practice and/or alternatives outlined.

Urban Pressures e.g. Rain and Water quality in Urban Areas

Combined sewer networks

- Historically – get water off site as quickly as possible
- Combined sewers designed for small populations & more permeable surfaces
- Many combined sewers have inadequate capacity to take increased rainfall ingress
- Sewage treatment plants dealing with lightly contaminated water unnecessary
- Discharge directly into water course via Storm overflows

= **significant pollution risk**

Contaminated surface water

- Abraded tyres from vehicles,
- Hydrocarbon compounds (some carcinogens)
- Car window washer and cleaner
- Coolant, de-icer and other chemicals
- Abraded road surface and other materials
- Dog faeces

= **significant pollution risk**





Nature-based Solutions to the Management of Rainwater and Surface Water Runoff in Urban Areas

Water Sensitive Urban Design
Best Practice Interim Guidance
Document

[Publications - Local Authority Water Programme \(lawaters.ie\)](http://lawaters.ie)

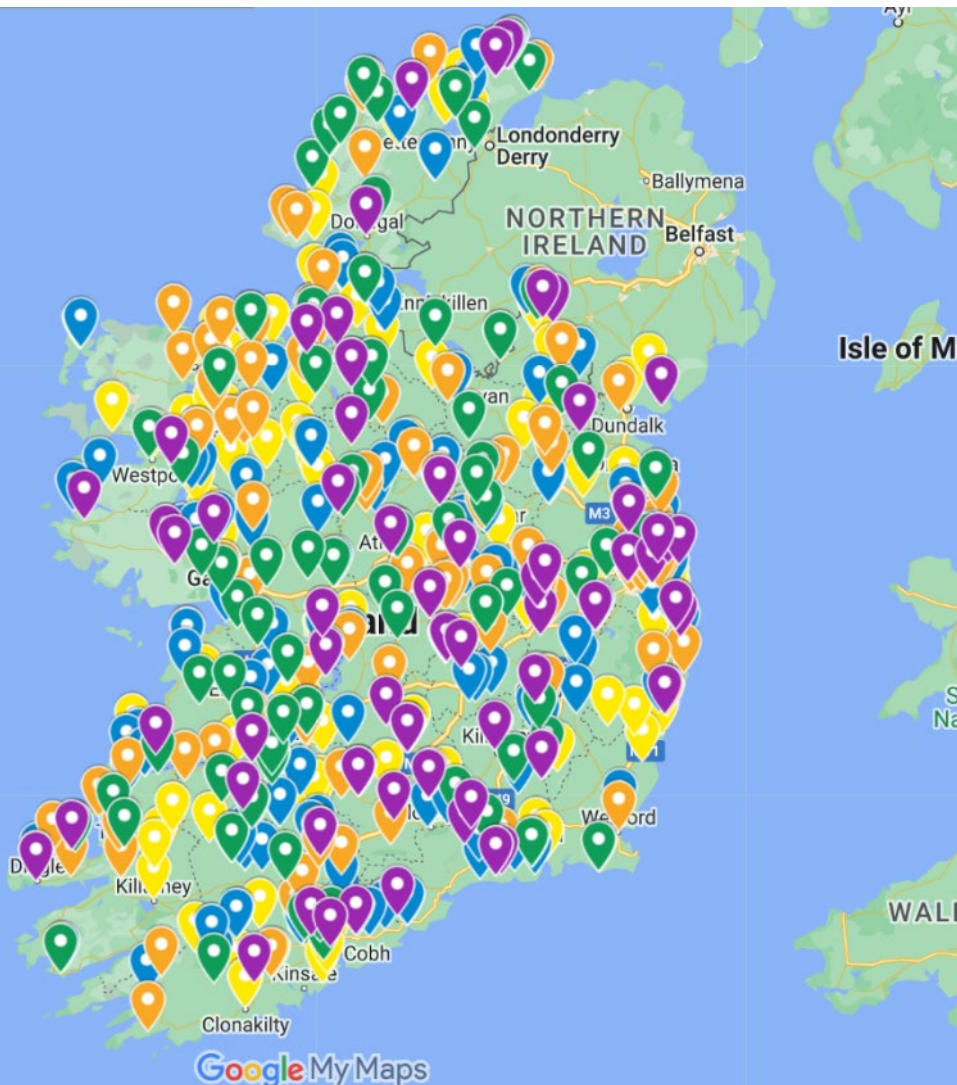




- 94 water themed events in August 2022
- Partnership with the Heritage Council
- Water Heritage Day
- Water Heritage Award
- Launch of **The Coomhola River Catchment (Cork) Blue Dot Booklet** by **Streamscapes**



LAWPROs Community Water Development Fund

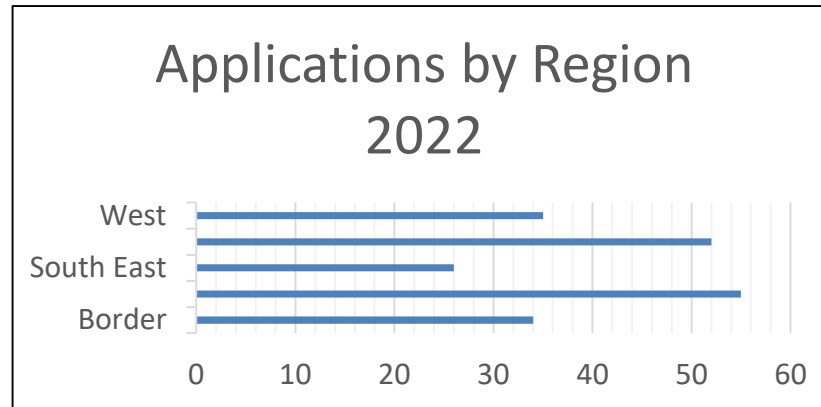


*Supporting locally led
water quality awareness and
actions*

€1.6m invested
€100k Local Awareness Fund
629 grants awarded
since 2018

Open Call to be launched on
26th November 2022
www.lawaters.ie

Community Water Development Fund 2022: National Summary

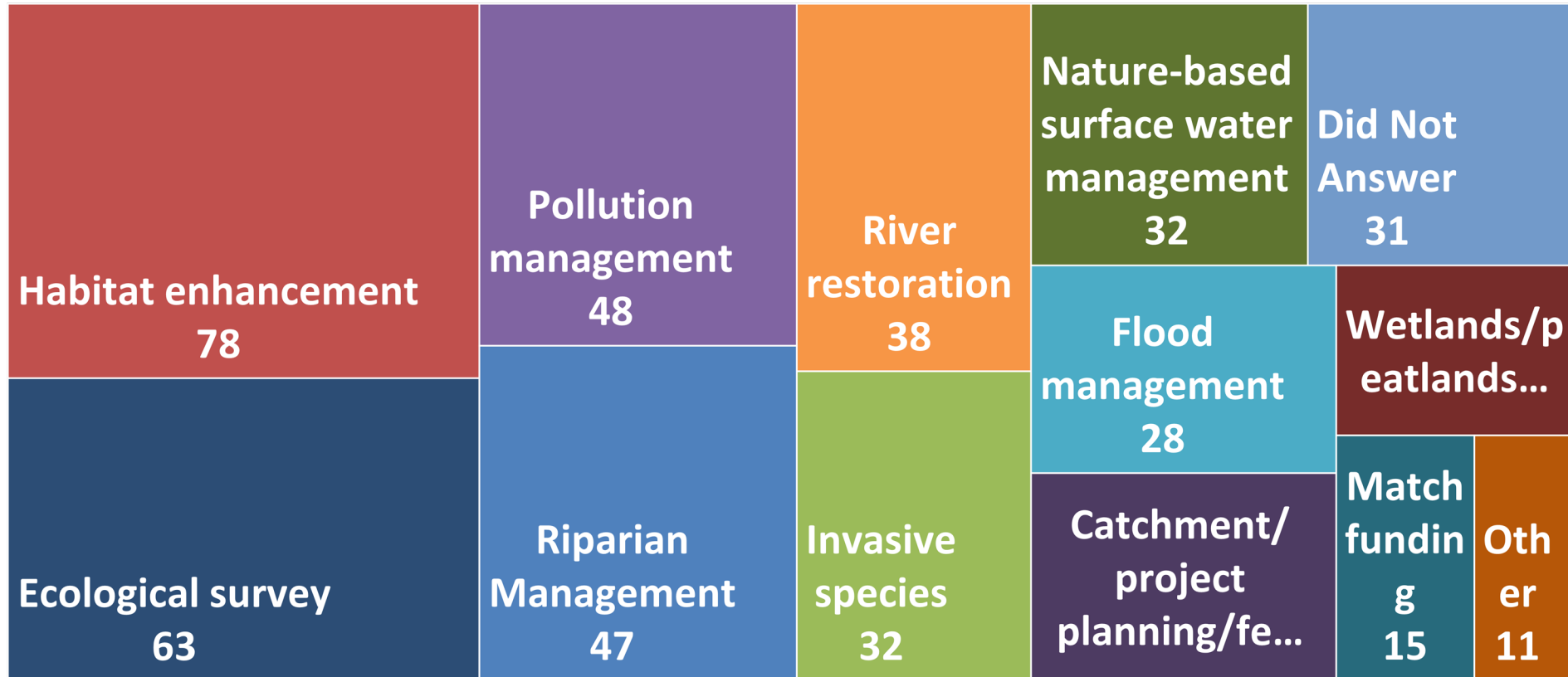


Region	Applications	Amount sought	Amount Granted
Border	34	€ 228,470.60	€121,103.94
Midlands and East	55	€ 224,830.80	€63,008.43
South East	26	€ 161,100.53	€118,622.64
South West	52	€ 238,173.90	€88,787.93
West	35	€ 186,256.38	€118,570.37
Overall grant amount sought	202	€ 1,038,832.21	€510,093.31

Community Water Development Fund 2022

Water Quality Actions – 469

WATER QUALITY ACTIONS BY PROJECT TYPE



Community Water Development Fund 2022

Water Quality Awareness – 609

WATER QUALITY AWARENESS BY PROJECT TYPE



CWDF 2022 by group type

